location from which the apparatus is directly suspended with the cable or rope unwinding at a controlled rate as the load or person descends, rather than an apparatus following a twisted configuration of a cable or rope which in turn has to have its lower end anchored at ground level in order to operate.

Disclosure of the Invention

The invention therefore envisages a descent apparatus for loads and/or persons, said apparatus including a cable or rope having one end adapted to fixed at an elevated location with the remainder of the cable or rope being wound around a pulley rotatably mounted within an outer housing via an axle shaft, wherein the outer housing is adapted to be attached to the load and/or person, and wherein the relative rotation between the inner pulley and the axle shaft is controlled by a closed circuit gear pump the gears of which form transmission means between the inner pulley and the axle shaft, said closed circuit gear pump forming part of a hydraulic circuit containing a constriction to control the speed of the pump and thus the speed of rotation of the inner pulley about the axle shaft and as a consequence the speed of descent of the descent apparatus as the cable or rope unwinds from the inner pulley.

Preferably the size of the constriction is fixed so as to provide a single predetermined speed of descent.

Alternatively the size of the constriction may be variable to provide for different speeds of descent.

Brief Description of the Drawings

One preferred embodiment of the invention will now be described with reference to the accompanying drawings, in which;

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A descent apparatus for loads and/or persons, said apparatus including a cable or rope having one end adapted to fixed at an elevated location with the remainder of the cable or rope being wound around a pulley rotatably mounted within an outer housing via an axle shaft, wherein the outer housing is adapted to be attached to the load and/or person, and wherein the relative rotation between the inner pulley and the axle shaft is controlled by a closed circuit gear pump the gears of which form transmission means between the inner pulley and the axle shaft, said closed circuit gear pump forming part of a hydraulic circuit containing a constriction to control the speed of the pump and thus the speed of rotation of the inner pulley about the axle shaft and as a consequence the speed of descent of the descent apparatus as the cable or rope unwinds from the inner pulley.

2. A descent apparatus as claimed in Claim 1, wherein the size of the constriction is fixed so as to provide a single predetermined speed of descent.

3. A descent apparatus as claimed in Claim 1, wherein the size of the constriction may be variable to provide for different speeds of descent.

4. A descent apparatus as claimed in any one of the preceding claims, wherein the inner pulley includes as cup-shaped member having an open end closed by a closure member both of which members carry radially outwardly extending flanges between which a space is defined to retain the cable or rope around the pulley.

5. A descent apparatus as claimed in Claim 4, wherein the cup-shaped member and the closure member define an inner cavity which contains said closed circuit